CLAIMS

1. A process for the synthesis of mesitylene which comprises treating pseudocumene with a catalytic composition containing a zeolite, in acid or prevalently acid form, selected from ZSM-5 zeolite having a crystal lattice made up of silicon oxide and aluminum oxide, and ZSM-5 modified by the partial or total substitution of Si with a tetravalent element such as Ti or Ge and/or the partial or total substitution of Al with other trivalent elements, such as Fe, Ga or B.

2. The process according to claim 1, wherein the zeolite is ZSM-5 zeolite having a crystal lattice made up of silicon oxide and aluminum oxide.

3. The process according to claim 2, wherein the molar ratio between silicon oxide and aluminum oxide is higher than 20.

4. The process according to claim 3, wherein the molar ratio between silicon oxide and aluminum oxide ranges from 20 to 1000.

5. The process according to claim 4, wherein the molar ratio between silicon oxide and aluminum oxide ranges from 25 to 300.

6. The process according to claim 1, wherein the catalytic composition contains the zeolite in a bound form, with a binder selected from alumina, silica,

magnesia, zirconia or mixtures thereof.

7. The process according to claim 6, wherein the weight ratio between zeolite and binder ranges from 5:95 to 95:5.

8. The process according to claim 7, wherein the weight ratio ranges from 20:80 to 80:20.

9. The process according to claim 1, wherein the temperature ranges from 225 to 400°C and the pressure is between 1 and 50 bar.

10. The process according to claim 1, wherein the temperature ranges from 250 to 375°C and the pressure is between 5 and 50 bar.

11. The process according to claim 1, carried out in liquid phase.

12. The process according to claim 1, wherein the WHSV space velocity is between 0.1 and 10 $hours^{-1}$.

13. The process according to claim 1, carried out in continuous, in a fixed bed reactor.

14. The process according to claim 1, wherein the pseudocumene is de-oxygenated before being treated with the catalytic composition.

15. The process according to claim 14, wherein the pseudocumene is de-oxygenated by means of degassing by saturation with an inert gas or by boiling.

16. The process according to claim 1, wherein the pseu-

documene used comes directly from distillation, without intermediate storage.

17. A process for regenerating a catalyst, at least partially exhausted, coming from the process according to claim 1, which comprises treating said catalyst at a temperature ranging from 450 to 550°C, at a pressure ranging from 1 to 3 bar, with mixtures of oxygen and nitrogen in a ratio ranging from 0.1 to 20% by volume, and with a GHSV space velocity of between 3000 and 6000 $hours^{-1}$.